Appendix. Sample Test Instructions and Worksheet

To ensure that all items of a product type are tested consistently, general instructions, specific testing procedures, and a standard reporting form must be used and distributed to the personnel performing the validation tests. The following instructions and worksheets have been developed to test non-IT equipment.

Y2K Test Instructions: USDA Non-IT Equipment

Step	Action Required
1	**Review equipment documentation.** Review your user manuals, as-builts, and any other pertinent information on the equipment you are about to test to gain information on date/clock functions that may or may not exist, and whether adjusting those date/clock functions will affect equipment passwords, nullify warranties, etc. For PCs, refer to manufacturer Web sites for test instructions.
2	**If necessary, seek technical expertise.** • If necessary, schedule the test date so that your local equipment manufacturer, vendor's representative, or O&M contractor—the service provider who is most knowledgeable about the technical aspects of the equipment—can attend to provide technical support. • If this equipment is connected to a system (e.g., a chiller is "connected" to cooling towers, whose operation is critical to the use of the chiller), then it is critical to have vendor representatives attend the system test on the same day. • Also, if necessary, schedule the test so that your local agency technical representative (e.g., your LAN administrator) can help you determine if date/clock functions exist, or if the test you are about to perform might affect the operation of other networked equipment.
3	**Verify that the equipment exists and is in use or is expected to be in use on January 1, 2000.** Does the product exist, is it currently in use, is it expected to be in use on January 1, 2000, and does the agency own it? (If it is leased, it is the responsibility of the lessor to confirm Y2K compliance.) If you answered no to any of the questions, stop the test. If new equipment has replaced the equipment identified in the Y2K inventory survey, test the new equipment.

4	**Verify the equipment has date/clock functions.** Does the equipment have a date/clock functions? If you answered yes, proceed to Step 5. If you answered no, stop the test.	
5	**Verify password operation.** If the unit is password protected, attempt to extend the password validation date beyond the test dates. Were you able to extend the validation date of your password? If you answered yes, proceed to Step 6. If you answered no, stop the test.	
6	**Back up all software, data, and configurations used by the equipment.** Does the equipment use software, store data, or produce data? If you answered yes, back up all software, configurations, and data that might be lost by an unsuccessful test. Make a "hard copy" of the data using paper printouts, floppy disks, or both. If the equipment uses software, stores data, or produces data, were you able to successfully back it up? If you answered no, stop the test.	
7	**Review software license for expiration date.** Does the software have an expiration date? If it does, indicate the expiration date on the worksheet and decide whether to proceed based on the expiration date (i.e., if any of the testing dates exceed the software expiration date, stop the test).	
8	**Isolate the equipment.** Disconnect the equipment from the LAN and isolate it from all linked equipment that could be affected by failure of the equipment you are about to test. The test should be done on the stand-alone unit, independent of all other devices.	
9	**Test the isolated equipment with a regressed date.** Turn the isolated unit's date/clock backward to October 1,1995, 8:15 a.m. Turn off the power to the equipment, then power the unit back up. If the unit retains the regressed date and functions properly, then proceed to Step 10. If it does not function properly, stop the test.	

10	**Test the isolated equipment with Y2K test dates.**
	• Advance the date/clock to **December 31, 1999**, 11:55 p.m. Wait until the unit has rolled over to the year 2000 (>6 minutes). Turn off the power to the equipment, then power the unit back up and check to see how the date is interpreted. If the equipment interprets the date as January 1, 2000, Saturday (and not as 1900), and if the equipment operates properly, then proceed with this test. If it interprets the new date as 1900, reset the date/clock to today's date, and return the unit to normal operation. If the unit tested OK with the advanced date, proceed to test the remaining test dates, which are required for total Y2K compliance. If any date results in improper operation, stop the test.
	(Proper operation means that the unit performs with correct date rollovers and that all output, transmitted data, and log and audit reports are accurate. All display dates will be accurate and all files will migrate properly where applicable.)
	• Advance the date/clock to **February 28, 2000**, 11:55 p.m. Wait until the unit has rolled over into the leap year, February 29, 2000, Tuesday (>6 minutes). Turn off the power, then power the unit back up. Check that the equipment operates properly, and that the new date was interpreted correctly. If the leap year date is interpreted correctly and the unit operates properly, then proceed.
	• Advance the date/clock to **February 29, 2000**, 11:55 p.m. Wait until the unit has rolled past the leap year, to March 1, 2000, Wednesday (>6 minutes). Turn off the power, then power the unit back up. Check that the equipment operates properly, and that the new date was interpreted correctly. If the new date is interpreted correctly and the unit operates properly, then proceed.
	• Advance the date/clock to **December 31, 2000**, 11:55 p.m. Wait until the unit has rolled to January 1, 2001, Monday (>6 minutes). Turn off the power, then power the unit back up. Check that the equipment operates properly, and that the new date was interpreted correctly. If the new date is interpreted correctly and the unit operates properly, then proceed.
11	**Test the equipment in a system test.**
	If the equipment being tested is part of a larger system of components, test each of those components, then connect them back together as a system (e.g., a chiller may need to be reconnected to cooling towers, a chemical feed pump, and an energy management system).
	If the equipment operates as part of a system, connect all components and repeat Steps 9–10 of the test.

Y2K Test Worksheet: USDA Non-IT Equipment

(Information to Be Provided by Field Tester

Tester name and organization

Tester telephone and fax numbers and e-mail addresses

Test date

Equipment name
Model number

Equipment location (building address)

Can you locate the equipment and is it in use?	☐ Yes	☐ No
Does the agency own the equipment?	☐ Yes	☐ No
Does the equipment have date/clock functions?	☐ Yes	☐ No

If the equipment utilizes passwords, will they be valid if you adjust the date/clock functions?　☐ Does not utilize passwords　☐ Yes　☐ No

If the equipment stores data, did you successfully back up all data before conducting the test?　☐ Does not store data　☐ Yes　☐ No

Could you set the date/clock functions back?	☐ Yes	☐ No
Could you advance the date/clock functions?	☐ Yes	☐ No
Was the isolated equipment test successful for all Y2K dates?	☐ Yes	☐ No
Did you perform a system test?	☐ Yes	☐ No
Was the system test successful for all Y2K dates?	☐ Yes	☐ No

Please describe as specifically as possible any failures that occurred during the testing.

Please provide any information you may have gathered on the costs (of repair/replacement) in order to make this equipment Y2K compliant.